

Work Order ID 79037

79037

Page 1

January-18-12 3:53:14 PM

Item ID: D3463-041 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Step Weldment Assembly
 Start Date: 18/01/2012 Start Qty: 4.00 *4* Cust Item ID:
 Required Date: 01/02/2012 Req'd Qty: 4.00 *4* Customer:
 Reference:

Approvals: Process Plan: M.L.J Date: 12/01/18 Tooling: Date: Run Start *NR1*
 QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr								
D3463	Rev B								
100	Large Fab	0.00							
100									
Large Fab	Memo	0.00							
Large Fab	Weld assembly as per dwg D3463 using DT8875								
110	QC9- Inspect visual per QSI004- Fusion Welds	0.00							
110									
QC	Memo	0.00							
Quality Control									
120	QC5- Inspect part completeness to step on W/O	0.00							
120									
QC	Memo	0.00							
Quality Control									




PTO

DAS
24
9-89

SMB
12-9-27
5/17/12/27

W/O: 79037		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3463-041 PAR #: — Fault Category: Large Tab NCR: Yes 8 DQA: 9/10/27 Date: 12/10/27
 Resolution: Re work Disposition: Re work QA: N/C Closed: ck Date: 12/10/28

NCR: 12-1922		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12.09.26	100	ARMS NOT WELDED AT 90°. RC. TOOLING.		See attached EMAIL. D3463-7 B/W: <u>B8 3441</u>	EL 12.9.26	 11/10/27		 11/10/27

NOTE: Date & initial all entries

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Approvals: Process Plan: Date: Tooling: Date: Run Start *NR1*
 QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Powdercoat Powder Coating m121878	White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel Memo 1- Mask areas indicated on dwg D3463 (holes, threads) START TIME: 1:10 OVEN TEMPERATURE: 400°F FINISH TIME: 1:40	0.00 0.00				3x ✓			mt 12/10/02
140 *140* HandFinish Hand Finishing	Wing Walk as per dwg QSI005 4.4 Batch 22500 Memo	0.00 0.00				3x ✓			12/10-8.
150 *150* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				3x ✓			12/10/03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Identify as per dwg & Stock Location: <u>6A</u>	0.00							
160									
Packaging	Memo	0.00				5x			<u>12/10/23</u>
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	0.00							<u>12/10/24</u>
Quality Control									

12-10-24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 1

Work Order ID: 79037

79037

Parent Item: D3463-041

D3463-041

Parent Item Name: Step Weldment Assembly

Start Date: 18/01/2012

Required Date: 01/02/2012

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV. A 05.11.18 new issue EC IPP revB: replace pressure
with wing walk DD 10.01.28 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D38-806

Purchased

No

100

Each

156.0000

2

8

238-806

SS DOWEL PIN 1" LONG

**

EL 12-9-25

Location

Loc Qty

Loc Code

ST399

56

117606

56

6

ST400

100

120119

100

D3453-3

Manufactured

No

100

Each

8.0000

1

4

D3453-3

Clevis

**

EL 12-9-25

78209 x 3

Location

Loc Qty

Loc Code

WA022

8

73622

8

D3453-5

Manufactured

No

100

Each

23.0000

1

4

D3453-5

Plug

**

EL 12-9-25

83438 x 3

Location

Loc Qty

Loc Code

WA

16

59204

0

78210

16

WA022

7

73623

7

D3463-1

Manufactured

No

100

Each

0.0000

1

4

D3463-1

Arm

**

EL 12-9-25

82313 x 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Picklist Print

January-18-12 3:53:18 PM

Work Order ID: 79037

79037

Parent Item: D3463-041

D3463-041

Parent Item Name: Step Weldment Assembly

Start Date: 18/01/2012

Required Date: 01/02/2012

Start Qty: 4.00

Required Qty: 4.00

D3463-3 Manufactured No

100 Each

8.0000

1

4

D3463-3

**

EL 12-9-25

Step

78212 x 2
83440 x 1

Location

Loc Qty

Loc Code

WA023

8

46269

8

D3463-5 Manufactured No

100 Each

13.0000

2

8

D3463-5

**

EL 12-9-25

End Cap

78838 x 3

Location

Loc Qty

Loc Code

WA023

13

70819

13

D3463-7 Manufactured No

100 Each

7.0000

1

4

D3463-7

**

EL 12-9-25

Drag Arm

Location

Loc Qty

Loc Code

WA

10

WA025

-3

73624

7

82308 x 3

83441 x 1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

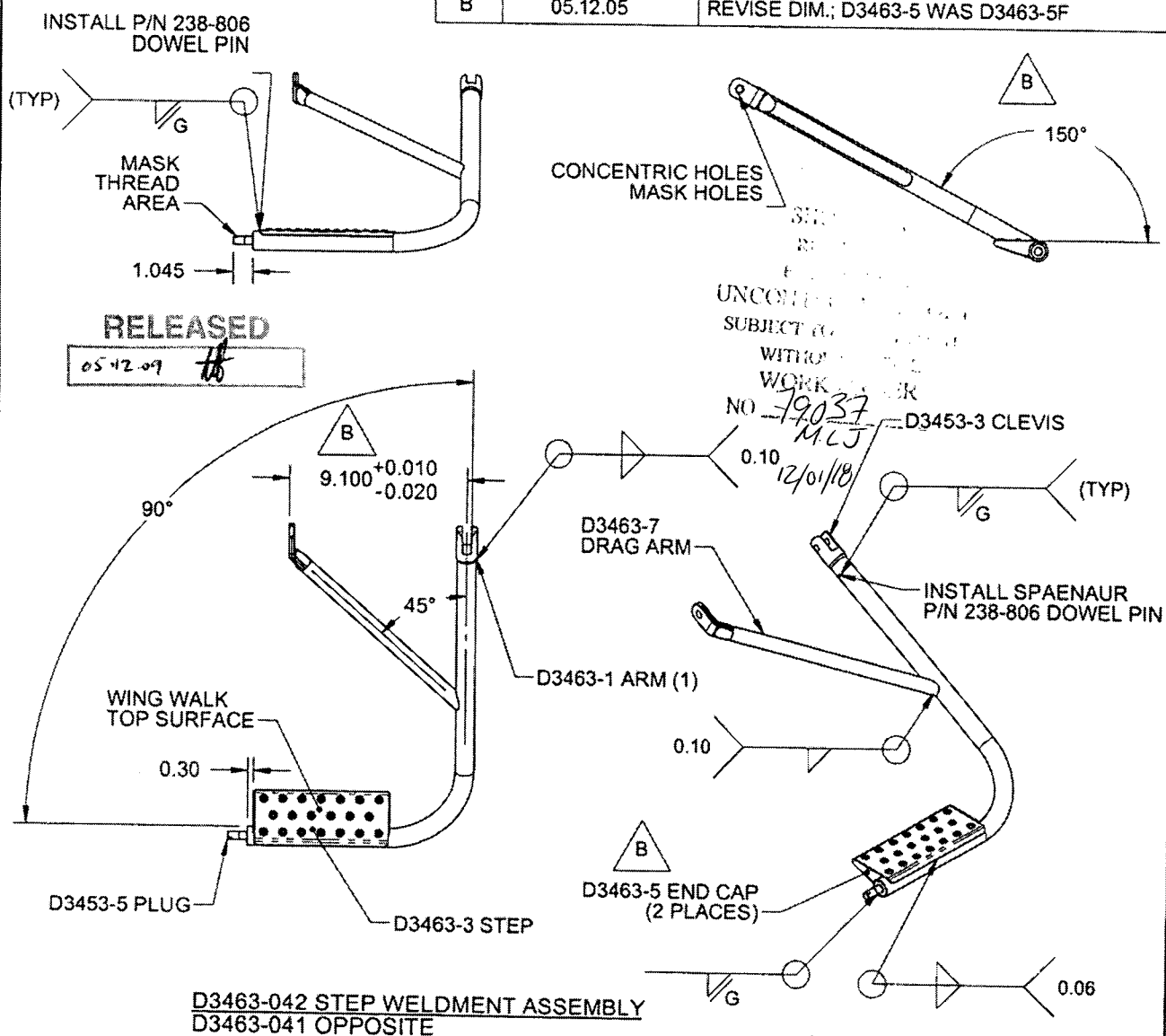
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3463	REV. B SHEET 1 OF 4
DATE 05.12.05	TITLE STEP WELDMENT SCALE 1:8		
A	05.09.20	NEW ISSUE	
B	05.12.05	REVISE DIM.; D3463-5 WAS D3463-5F	



NOTES:

- 1) WELD PER DART QSI 004
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.010
- 6) IDENTIFY WITH DART P/N USING FINE POINT PERMANENT INK MARKER

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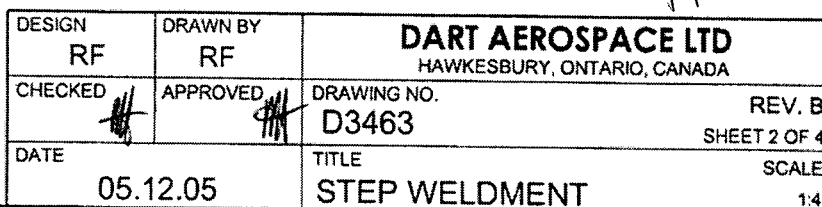
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector


Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

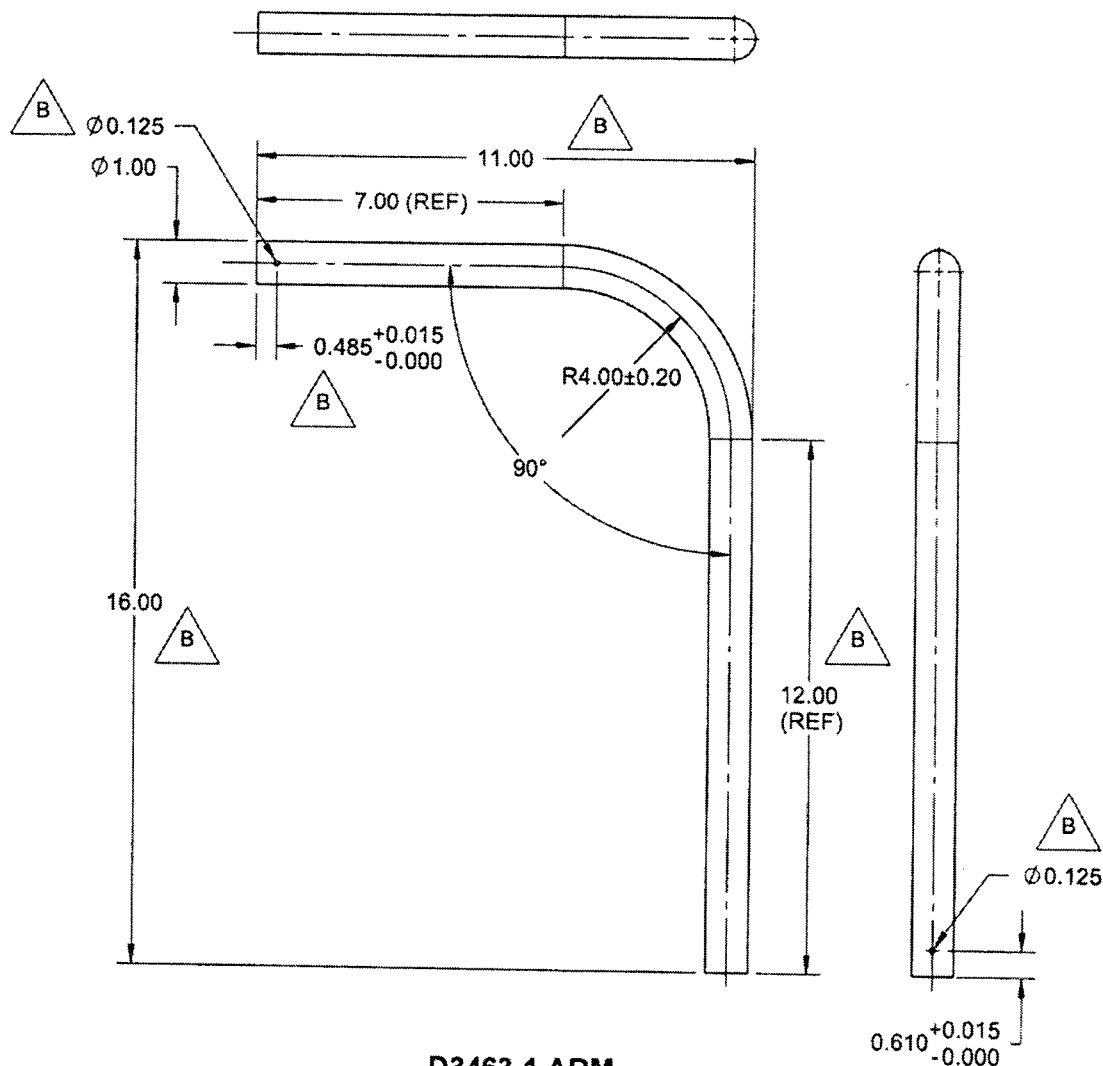
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



05.12.09 



D3463-1 ARM

1) MATERIAL: AISI 316/304 SS SEAMLESS TUBING (REF. DART SPEC. M304TR1.000W.120)
2) FINISH: NONE
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
4) ALL DIMENSIONS ARE IN INCHES
5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.025

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

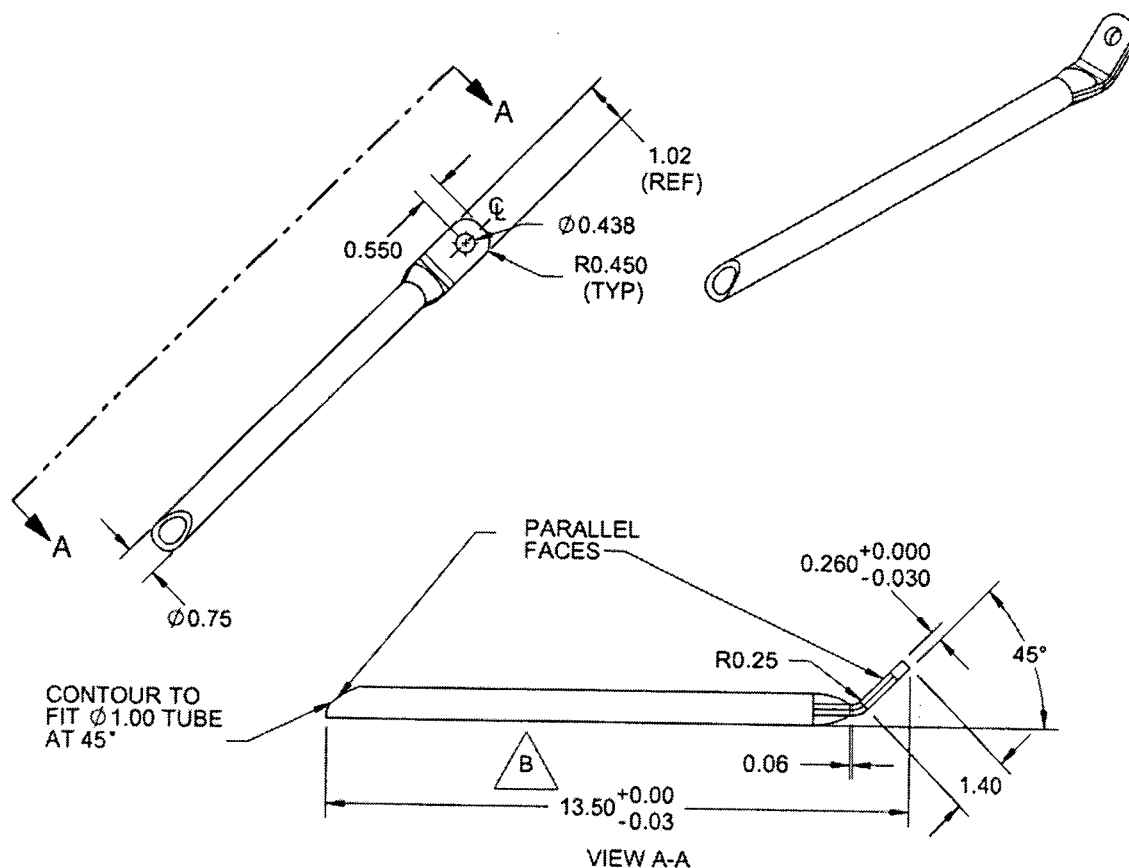
NOTE: Date & initial all entries

DART

DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3463	REV. B SHEET 3 OF 4
DATE 05.12.05	TITLE STEP WELDMENT		SCALE 1:4

RELEASED

05.12.05

**D3463-7 DRAG ARM****NOTES:**

- 1) MATERIAL: AISI 316/304 SS SEAMLESS TUBING (REF. DART SPEC. M304TR0.750W.120)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.010

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

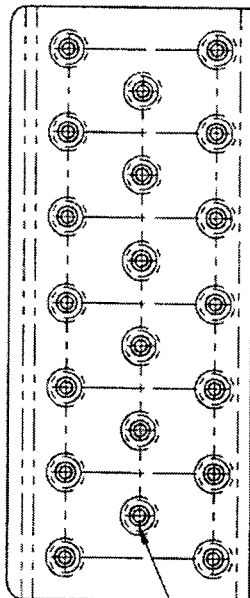
NOTE: Date & initial all entries



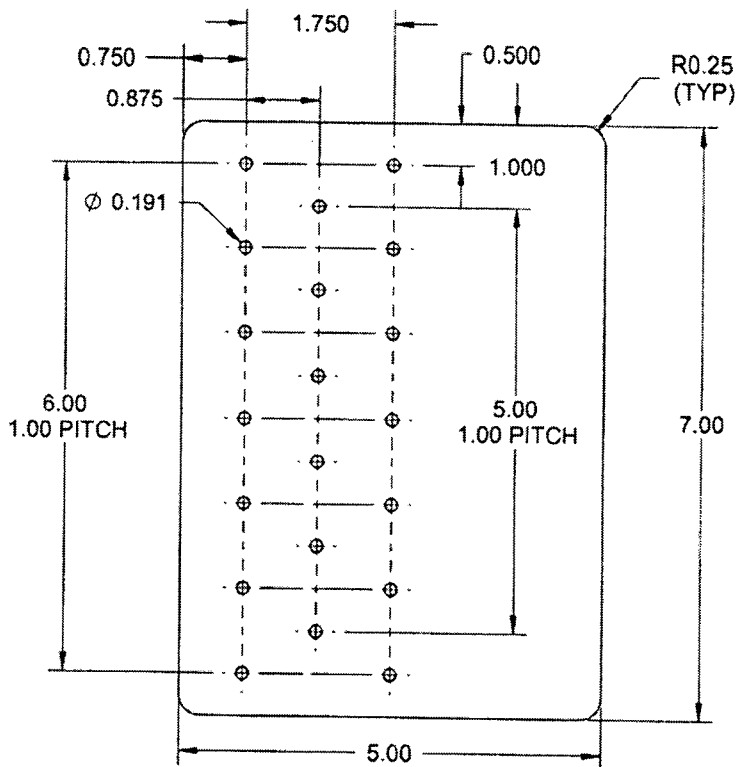
DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3463	REV. B SHEET 4 OF 4
DATE 05.12.05	TITLE STEP WELDMENT		SCALE 1:2

RELEASED

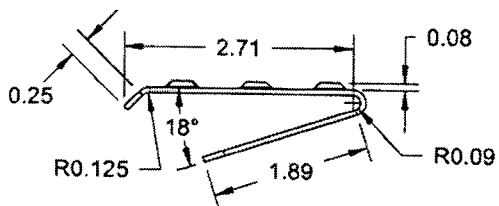
05.12.05 #



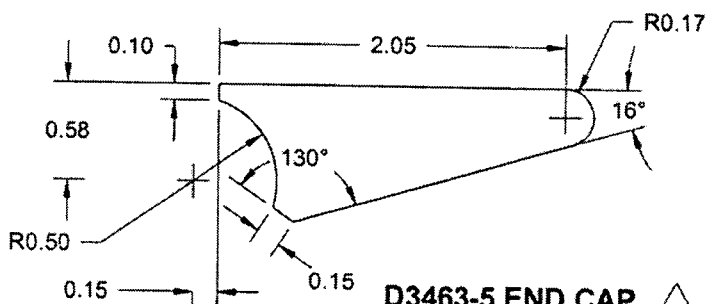
FORM USING
D3463-3T1



D3463-3F FLAT PATTERN



D3463-3 STEP



D3463-5 END CAP
SCALE 1:1

NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET, 0.060 THICK (REF. DART SPEC. M304S16GA)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.010

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Marc Bellavance

From: David Shepherd <dshepherd@dartaero.com>
Sent: Wednesday, September 26, 2012 1:27 PM
To: 'Marc Bellavance'
Cc: 'Downing, Eric'; 'Smith, Pat'; 'Lacelle, Linda'; 'El-Kassis, Isam'
Subject: RE: Pilot/Copilot Step

Marc,

On the basis that this step is manufactured from heavy wall stainless steel tubing, I believe it is acceptable to save the step as you have outlined below.

I don't see this creating a problem in service. The load testing that would have been completed on that step would have been extreme.

David

From: Marc Bellavance [<mailto:mbellavance@dartaero.com>]
Sent: September-26-12 10:24 AM
To: Shepherd, David
Cc: Downing, Eric; Smith, Pat; Lacelle, Linda; El-Kassis, Isam
Subject: Pilot/Copilot Step
Importance: High

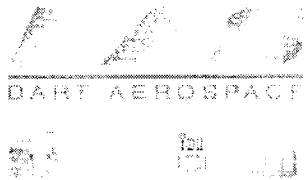
David,

Eric Larocque came to see me with the following issue:

After completing welding of the D3463-041 Step, it was found at inspection that the weldment was not quite perpendicular. EricL suggested he remove the D3463-7 Drag Arm and buff the D3463-1 Arm to remove the welding bead. By doing so, a small portion of the tube (over 0.10" length) have now a diameter of 0.987" (worst case) in lieu of 1.00". So the wall in the location shown on the attached drawing is now 0.107" instead of 0.120". I have verified how this step was substantiated and don't see any calculations (done by testing).

Are you OK with EricL proceeding with welding a new D3463-7 Drag Arm to D3463-1 to complete/save the assembly/work done on this step so far? Or, if you think it's best to scrap the step, then it will be done.

Thanks,



Marc Bellavance
Technical/Shop Support
T. 613-632-5200 | C. 613-676-0992 | F. 613-632-9311
1270 Aberdeen Street, Hawkesbury, Ontario, Canada, K6A 2K7
Product Documentation: [Verify Revision Status/Download HERE!](#)

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